

Weather Warm Ups 10 Weeks



WEATHER WARM UP WEEK 1

MONDAY

What is the energy associated with the motion of particles?

- a. thermal/heat
- b. kinetic
- c. potential
- d. chemical

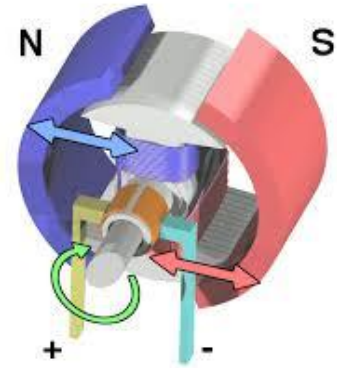
TUESDAY

A type of energy is a tightly stretched rubber band?

- a. kinetic
- b. thermal/heat
- c. potential
- d. Light/radiant

WEDNESDAY

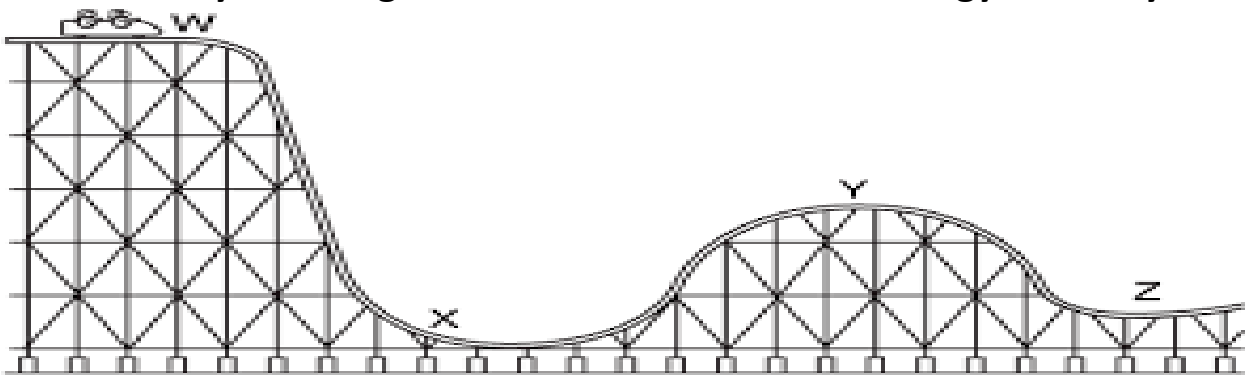
What type of energy transformation occurs in the picture at the right?



_____ →

THURSDAY

Study the image of the rollercoaster what energy is mostly mechanical kinetic energy?



- a. W
- b. X
- c. Y
- d. Z

WEATHER WARM UP WEEK 2

MONDAY

In the Law of Conservation of Energy what happens to the total amount of energy?

- a. It's increased.
- b. It remain the same.
- c. It's decreased.
- d. Nothing happens to the energy.

TUESDAY

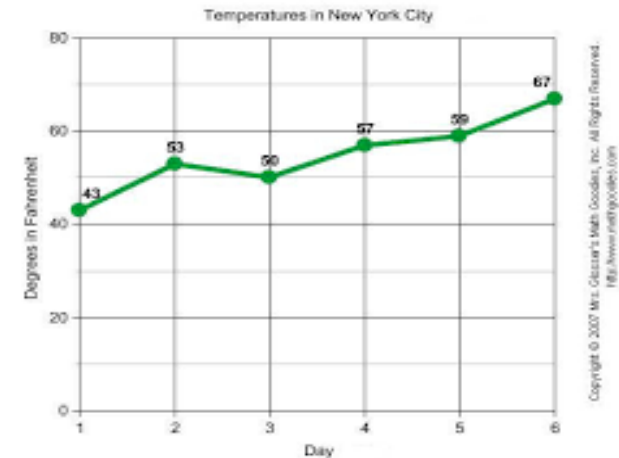
In a graph the x-axis is called the _____?

- a. manipulated independent variable
- b. dependent respondent variable
- c. title
- d. nothing

WEDNESDAY

In a graph, the y-axis is labeled?

- a. manipulated independent variable
- b. dependent respondent variable
- c. title
- d. nothing



Which of the following statements describes the job of simple machines?

THURSDAY

- a. Simple machines decrease the amount of force needed.
- b. Simple machines increase the amount of force needed.
- c. Simple machines keep the amount of force needed the same.
- d. Simple machines don't change the amount of force needed.

WEATHER WARM UP WEEK 3

MONDAY Which of the following statements describes the job of a spring scale?

- a. Spring scales measure the amount of work in joules.
- b. Spring scales measure the amount of force in joules
- c. Spring scales measure the amount of work in Newtons.
- d. Spring scales measure the amount of force in Newtons.

TUESDAY What is the device that changes electrical energy to mechanical energy?

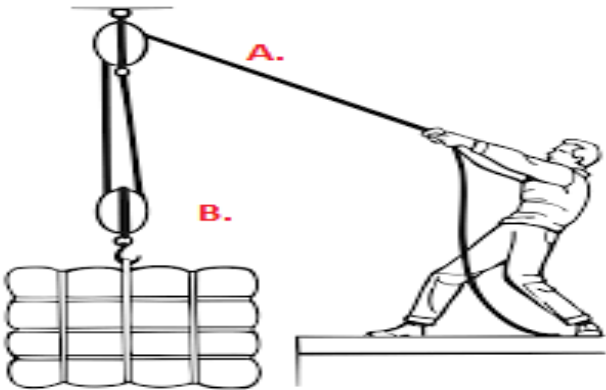
- a. generator
- b. electric motor
- c. battery
- d. electromagnet

WEDNESDAY

What simple machine is a screw most closely related to? _____

What simple machine is a wedge most closely related to? _____

THURSDAY



Which pulley changes the direction only?

Which pulley changes the direction and the effort force?

WEATHER WARM UP WEEK 4

MONDAY

Any type of solid or liquid water that falls to Earth?

- a. precipitation
- b. condensation
- c. evaporation
- d. transpiration

Which of the following can be described freezing ice pellets while falling through the cold air?

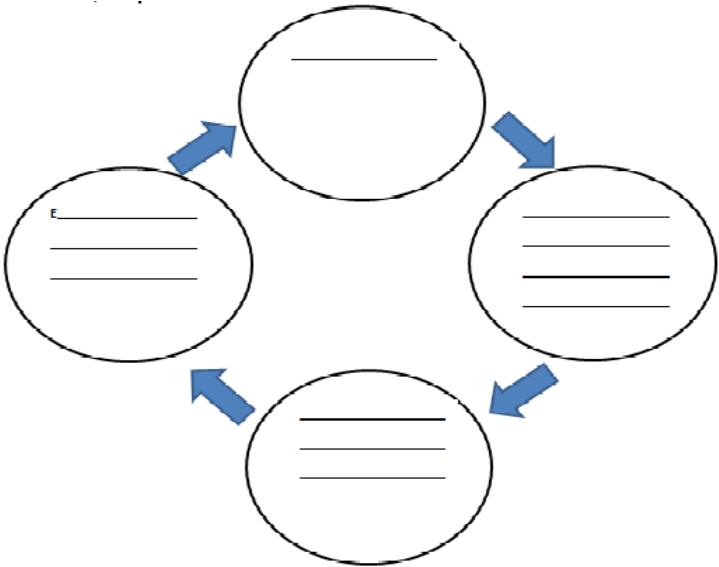
- a. rain
- b. freezing rain
- c. sleet
- d. hail

TUESDAY

Write the key words for each part of the water cycle.

- Condensation =
- Dew =
- Evaporation =
- Frost =
- Ground Water =
- Precipitation =
- Run-Off =
- Surface Water =
- Transpiration =

WEDNESDAY (Put the water cycle in the correct order).



**precipitation, run-off, surface water
condensation, dew, evaporation, frost,
ground water, transpiration**

THURSDAY



- ___ A. Condensation
- ___ B. Dew
- ___ C. Evaporation
- ___ D. Frost
- ___ E. Ground Water
- ___ F. Precipitation
- ___ G. Run-Off
- ___ H. Surface Water
- ___ I. Transpiration

- 1. Water vapor changes to water droplets.
- 2. Water vapor condenses onto a surface.
- 3. Water droplets fall in various forms.
- 4. Water sinks in the porous ground.
- 5. Water enters the atmosphere as water vapor.
- 6. Precipitation that falls back to sea level.
- 7. Water vapor that changes directly to ice crystals on a surface.
- 8. Plants release water vapor.
- 9. Water collects on top of surfaces and the ground.

WEATHER WARM UP WEEK 5

MONDAY

Match the scientist with their job description.

- | | |
|-----------------------------|---|
| __ 1. Atmospheric Scientist | A. Scientist who studies water. |
| __ 2. Climatologist | B. Scientist who studies the atmosphere. |
| __ 3. Hydrologist | C. Scientist who studies Earth's weather over time. |
| __ 4. Meteorologist | D. Scientist who studies the weather. |

TUESDAY

Write what these weather instruments measure:

- Anemometer = _____
- Barometer = _____
- Rain Gauge = _____
- Sling Psychrometer = _____
- Thermometer = _____
- Wind Vane = _____

WEDNESDAY

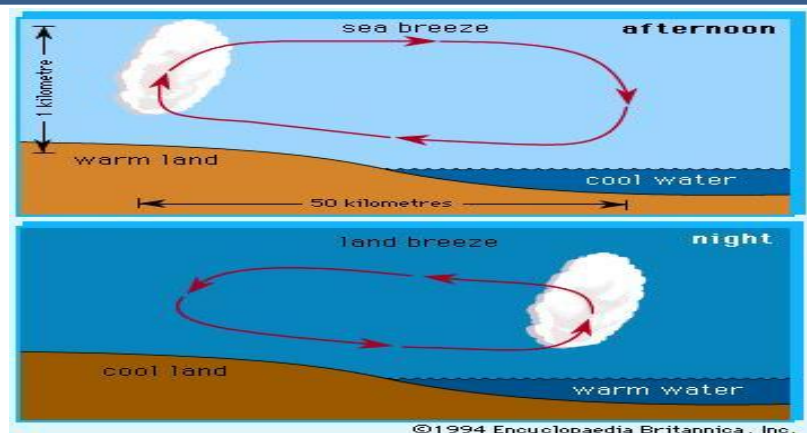
What is the percentage of land and water on Earth?

Land = _____% Water = _____%

Where is most of the water on Earth's surface?

Explain why hurricanes form over warm water temperatures of 80°F (20 °C).

THURSDAY



Describe the pictures to the left.

WEATHER WARM UP WEEK 6

MONDAY

How does the Gulf Stream affect climate (tell your shoulder partner and then write your answer below).

What three factors affect climate?

TUESDAY

Air pressure _____ as molecules of gas get _____ apart.

This gas makes of 78% of the atmosphere? _____

This gas makes up 21% of the atmosphere? _____

This gas makes up about 1% of the atmosphere? _____

WEDNESDAY

Is air a substance or just empty space explain your reasoning below?



Match the layers with their objects.

THURSDAY

- ___ 1. Exosphere
- ___ 2. Ionosphere
- ___ 3. Mesosphere
- ___ 4. Stratosphere
- ___ 5. Thermosphere
- ___ 6. Troposphere

- A. airplanes, people, & weather
- B. ozone layer
- C. meteors & coldest layer
- D. hottest layer
- E. Aurora Borealis (pretty lights or ions)
- F. space ships, satellites, space station, & space

WEATHER WARM UP WEEK 7

TUESDAY

WEDNESDAY

MONDAY (Draw symbols and write the words).

Area where two air masses meet?

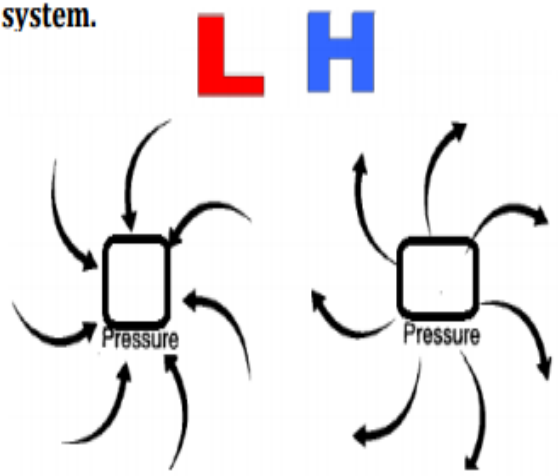
Area where warm air mass slides over a cold air mass?

Area where a cold air mass pushes under a warm air mass?

Area where a cold air mass is caught between two cold air masses?

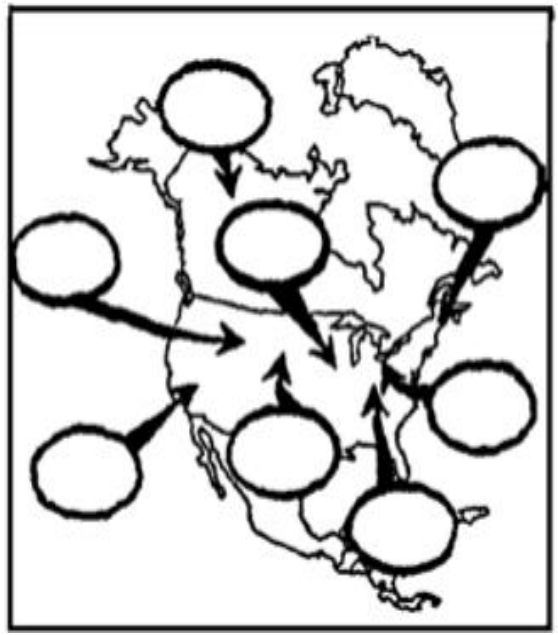
Area where warm air mass and cold air mass meet and stay for a while?

Place an "L" or an "H" in the center of the swirling arrows that explains that pressure system.



Winds around _____ pressure systems spiral inward counterclockwise. Winds around _____ pressure systems spiral outward clockwise.

Label the air masses with their abbreviations.



THURSDAY

A barometer measure _____ and it's units are _____ or _____.

A rising barometer is an _____ in air pressure. The weather associated with _____ air pressure is _____.

A falling barometer is a _____ in air pressure. The weather associated with _____ air pressure is _____.

WEATHER WARM UP WEEK 8

MONDAY

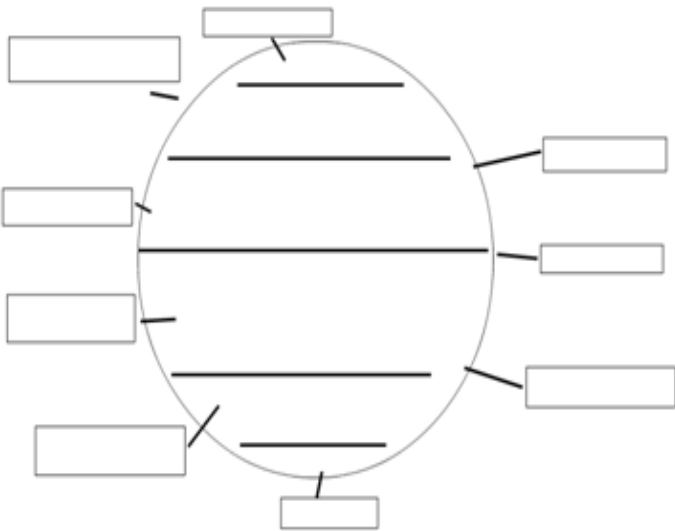
J _____ S _____: This is a column of air riding in the sky _____ the earth. It affects weather. Moves weather in U.S. from _____ to _____. T _____ W _____ move hurricanes from _____ to _____.

TUESDAY

Winds _____ and _____ because of the _____ causing Trade, Westerlies and Prevailing Winds, _____ Effect, Coriolis Effect!
Winds will blow from _____ to _____.

WEDNESDAY

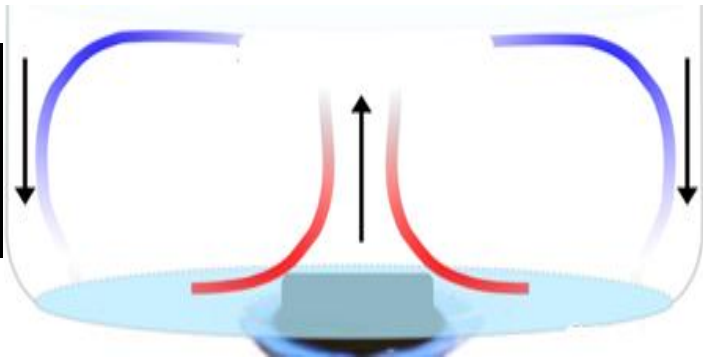
Label the Global Winds.



Global winds are caused by the _____ of the _____.

THURSDAY

Explain convection currents and label which current is low and high pressure.



Water
or Land

_____ holds heat longer.
_____ heats up faster.

WEATHER WARM UP WEEK 9

MONDAY

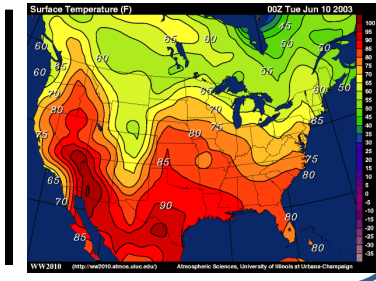
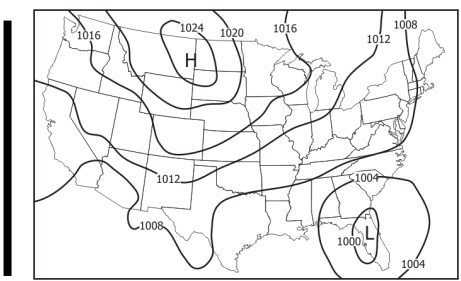
The _____ Current brings _____ ocean waters to the East Coast (South Carolina).

The _____ Current brings _____ ocean waters to the West Coast (California).

Current Tricks: _____

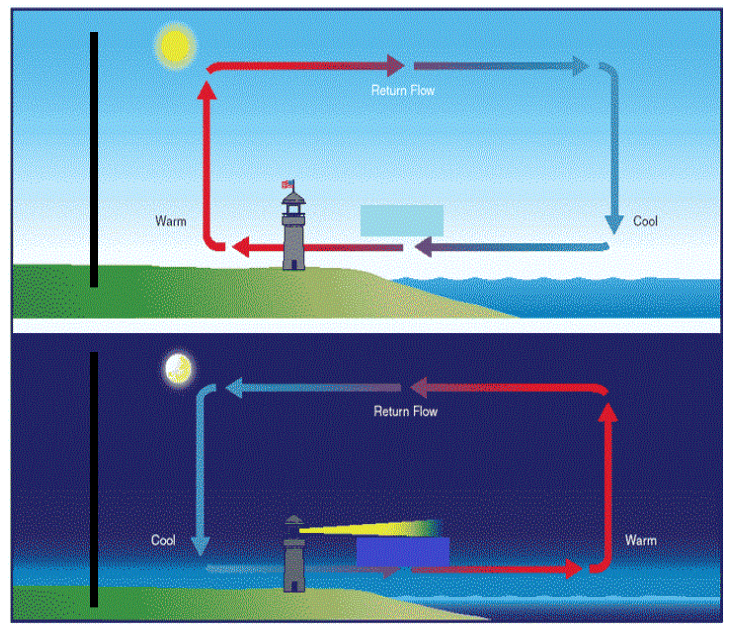
TUESDAY

Label which one is an isotherm map and a isobar map.



WEDNESDAY

Label Land and Sea Breeze.



This is a picture of the _____ Effect

THURSDAY

The _____ drives the greenhouse effect. The heat transfer that is trapped is _____.

_____ % of the radiation is absorbed.



WEATHER WARM UP WEEK 10: SCIENTIFIC ARGUMENTS, CLAIMS, EXPLANATIONS, DESIGNS

MONDAY-FILL IN SEP S.1A.7

C_____ and a_____ scientific
a_____ to support c_____,
explanations, or d_____ using
e_____ from observations, data, or
i_____ texts.

TUESDAY-MY CLAIM

What is one thing that you have learned about how humans impact the atmosphere?

WEDNESDAY-MY EVIDENCE

Write one observation, data (graph) or informational text that proves how you claim that humans have impacted the atmosphere?

THURSDAY-
MY REASONING

Based on your evidence above, give your reasoning behind your argument claiming that humans have impacted the atmosphere. *Example: Based on my graph explaining carbon dioxide released, I feel validated in my claim that humans added to the pollution adding to climate change over time.*